

REMARKS

Claims 1-21 are presently active.

In the Office Action dated 7 April 2003 ("Office Action"), claims 1, 2, 8, 9, 15, and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by Boucher, et al., U.S. patent 6,427,173 ("Boucher"); claims 3, 4, and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Boucher in view of Rubin, U.S. patent 4,525,795 ("Rubin"); claims 5 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Boucher in view of Findlater, et al., U.S. patent 6,385,208 ("Findlater"); and claims 10 through 14, and claims 17-21, were rejected for similar reasons as stated above.

To better define the invention, claims 1, 2, 6, 8, 9, and 13 are amended by this Amendment.

Applicant believes all of the claims are patentable over the cited references. Before discussing the specific rejections, the novelty and the amendments to the claims are first discussed.

Discussion of novelty and amendment to the claims

The PHY-to-MAC words and the MAC-to-PHY words in the present application should not be confused with the packets that are transmitted from one PHY to another PHY over a transmission medium, such as an Ethernet cable. The PHY-to-MAC words and MAC-to-PHY words of the present application are words that are exchanged between a PHY and a MAC within the same stack.

As discussed in the previous office response, the feature of a slow-mode PHY-to-MAC word having a transmit cycle field allows a particular embodiment to support many data speeds in a flexible manner without changing the clock signal frequency. This is so because a MAC may or may not provide data to the PHY in the "next" MAC-to-PHY word, depending upon whether the transmit cycle field in the PHY-to-MAC word is a 1 or 0. Loosely stated, the transmit cycle field controls the "flow" of data (which will eventually be transmitted over the medium to another PHY) from the MAC to the PHY.

Accordingly, independent claims 1 and 8 are amended to better define the "slow-mode PHY-to-MAC word" and to better define the "next" MAC-to-PHY word.

Independent claim 15 is amended to better define the two situations in which the transmit cycle field is set to a first value, and when it is set to a second value.

Claims 2, 6, 9, and 13 are amended to better define the “equal speed mode” PHY-to-MAC word.

35 U.S.C. §102(e) rejection of claims 1, 2, 8, 9, 15, and 16 over Boucher

Boucher teaches how the processing of received data packets may be accelerated, where messages selected for “fast-path” processing avoid the standard protocol stack and instead are handled by special purpose hardware. Nowhere does Boucher teach the claims of the present application.

Specifically, claims 1 and 8 recite a slow-mode PHY-to-MAC word having a transmit cycle field. The transmit cycle field indicates to the MAC whether or not it is to include data in the “next” MAC-to-PHY word. The “next” MAC-to-PHY word is transmitted by the MAC to the PHY subsequent to the MAC receiving the slow-mode PHY-to-MAC word from the PHY.

Nowhere does Boucher teach this claim limitation. Accordingly, claims 1 and 8, and claims 2 and 9 which are dependent upon claims 1 and 8, respectively, are believed patentable over Boucher.

Claim 15 recites the limitation that if the transmit cycle field of a first slow mode PHY-to-MAC word is set to a first value, , then the MAC is requested by the PHY to provide transmit data in a second MAC-to-PHY word for transmission over the medium. The second MAC-to-PHY word succeeds the first MAC-to-PHY word. If the transmit cycle field of the first slow mode PHY-to-MAC word is set to a second value different from the first value, then the MAC is requested by the PHY not to include transmit data in the second MAC-to-PHY word.

Again, nowhere does Boucher teach this claim limitation. Accordingly, claim 15, and claim 16 which depends upon claim 15, are believed patentable over Boucher.

35 U.S.C. §103(a) rejection of claims 3, 4, and 6 over Boucher in view of Rubin

Rubin is cited merely for teaching words that are each 12 bits wide. Consequently, for the reasons given above regarding Boucher, claims 3, 4, and 6 are believed patentable over Boucher and Rubin.

35 U.S.C. §103(a) rejection of claims 5 and 7 over Boucher in view of Findlater

Nowhere does Findlater teach or suggest the claimed limitation of a slow mode PHY-to-MAC word that includes a transmit cycle field to indicate whether the MAC is to provide data in the next MAC-to-PHY word. Consequently, for the same reasons as given above regarding Boucher, claims 5 and 7 are believed patentable over Boucher and Findlater.

Rejection of claims 10 through 14, and claims 17-21

For the same reasons as given above, these claims are believed patentable over the cited references.

Respectfully submitted,

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